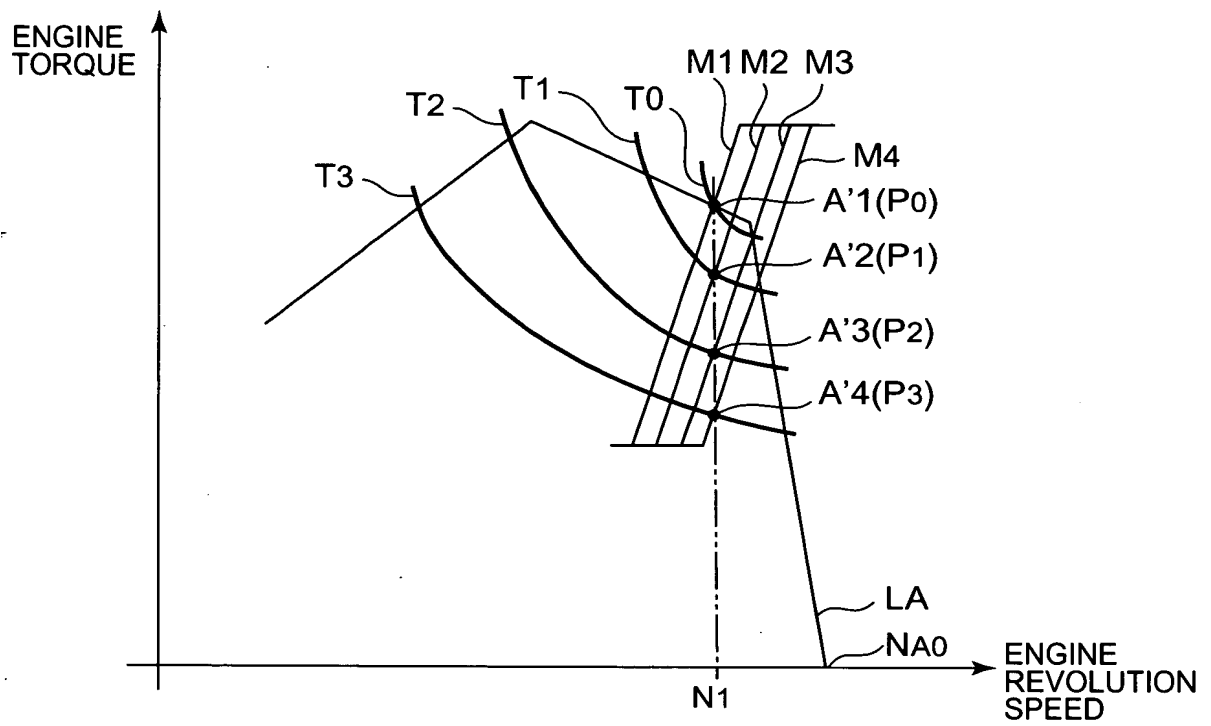


The diagram illustrates a hydraulic system architecture. At the top, a large rectangular block labeled **10** represents the **PUMP CONTROLLER**. This controller is interfaced with several input components on its left side: **11** (WORK MACHINE OPERATION STATE DETECTOR), **12** (TRAVELING OPERATION STATE DETECTOR), **13** (ENGINE WATER TEMPERATURE SENSOR), **14** (OIL TEMPERATURE SENSOR), and **15** (EXTERNAL AIR TEMPERATURE SENSOR). The controller also manages output components on its right side, including **16** (WORK MODE SELECTOR), **17** (STORAGE DEVICE), and a **SETTING TABLE ~ 50**. The hydraulic system itself consists of a **20** (ENGINE CONTROLLER) connected to an **ENGINE** (**21**) and a **FUEL INJECTION PUMP** (**22**). The pump is driven by a motor (**23**) and feeds into a **32** (SWASH PLATE CONTROL DEVICE). This device is part of a larger assembly (**31**) that includes another **SWASH PLATE CONTROL DEVICE** (**42**) and a **HYDRAULIC ACTUATOR** (**34**). A **PILOT PRESSURE OPERATION VALVE** (**35**) is also connected to the system. A **43** (SWASH PLATE CONTROL DEVICE) is connected to a **44** (HYDRAULIC ACTUATOR), which is further connected to a **45** (FAN). The entire system is designed to optimize hydraulic pressure based on various operational and environmental parameters.

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FIG. 2



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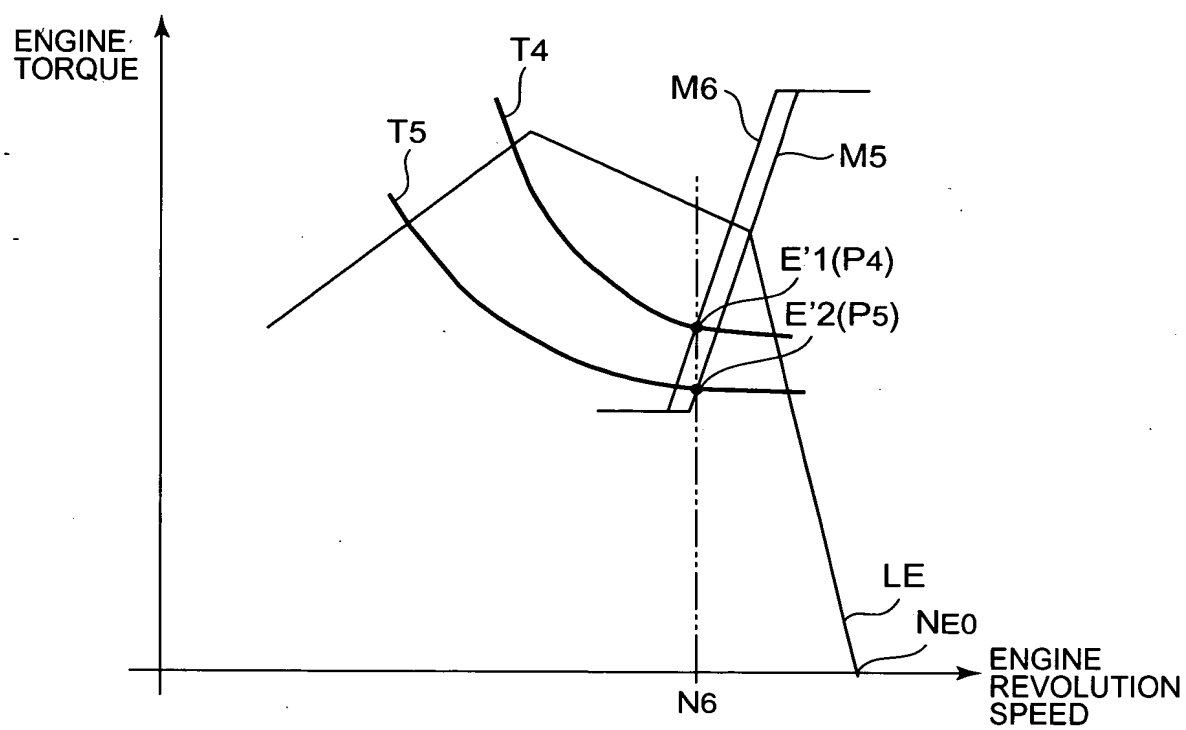
FIG. 3

OPERATION MODE	MATCHING REVOLUTION SPEED	PUMP TORQUE CONTROL LINE	ENGINE OUTPUT TORQUE CONTROL LINE	OUTPUT HORSEPOWER AT MATCHING POINT	CASE CLASSIFICATION DEPENDING ON AUXILIARY MACHINE HORSEPOWER	ENGINE OUTPUT
A1	N1	M1	T0	P0		P0
A2	N1	M2	T1	P1	$\Sigma Lf \geq Ls$	P0
					$\Sigma Lf < Ls$	$P1 + \Sigma Lf$
A3	N1	M3	T2	P2		$P2 + \Sigma Lf$
A4	N1	M4	T3	P3		$P3 + \Sigma Lf$

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FIG. 4



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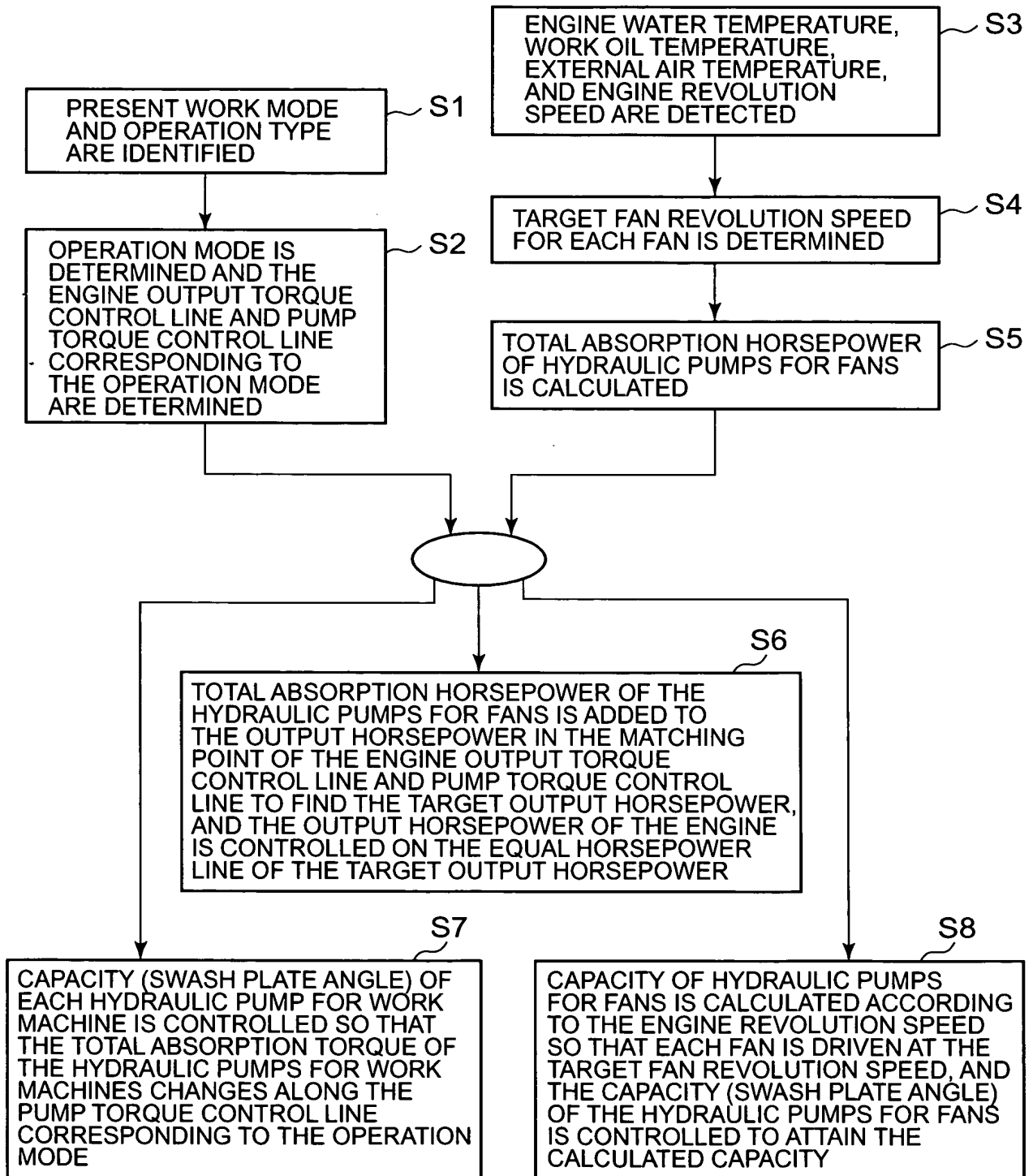
FIG. 5

OPERATION MODE	MATCHING REVOLUTION SPEED	PUMP TORQUE CONTROL LINE	ENGINE OUTPUT TORQUE CONTROL LINE	OUTPUT HORSEPOWER AT MATCHING POINT	ENGINE OUTPUT
E1	N6	M5	T4	P4	$P4 + \Sigma Lf$
E2	N6	M6	T5	P5	$P5 + \Sigma Lf$

50

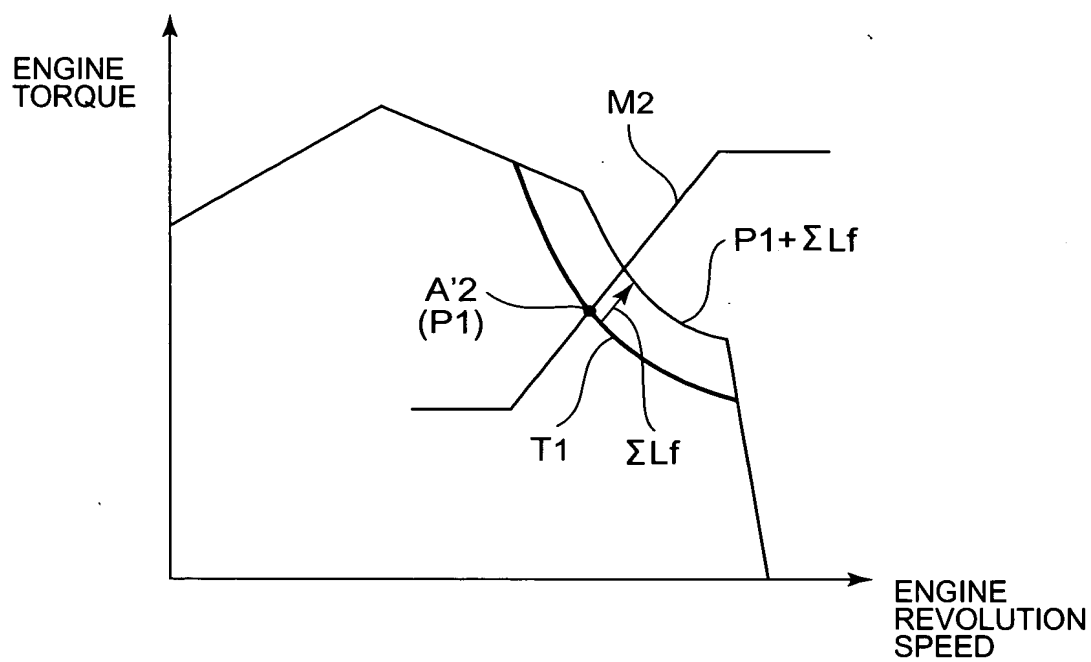
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FIG. 6



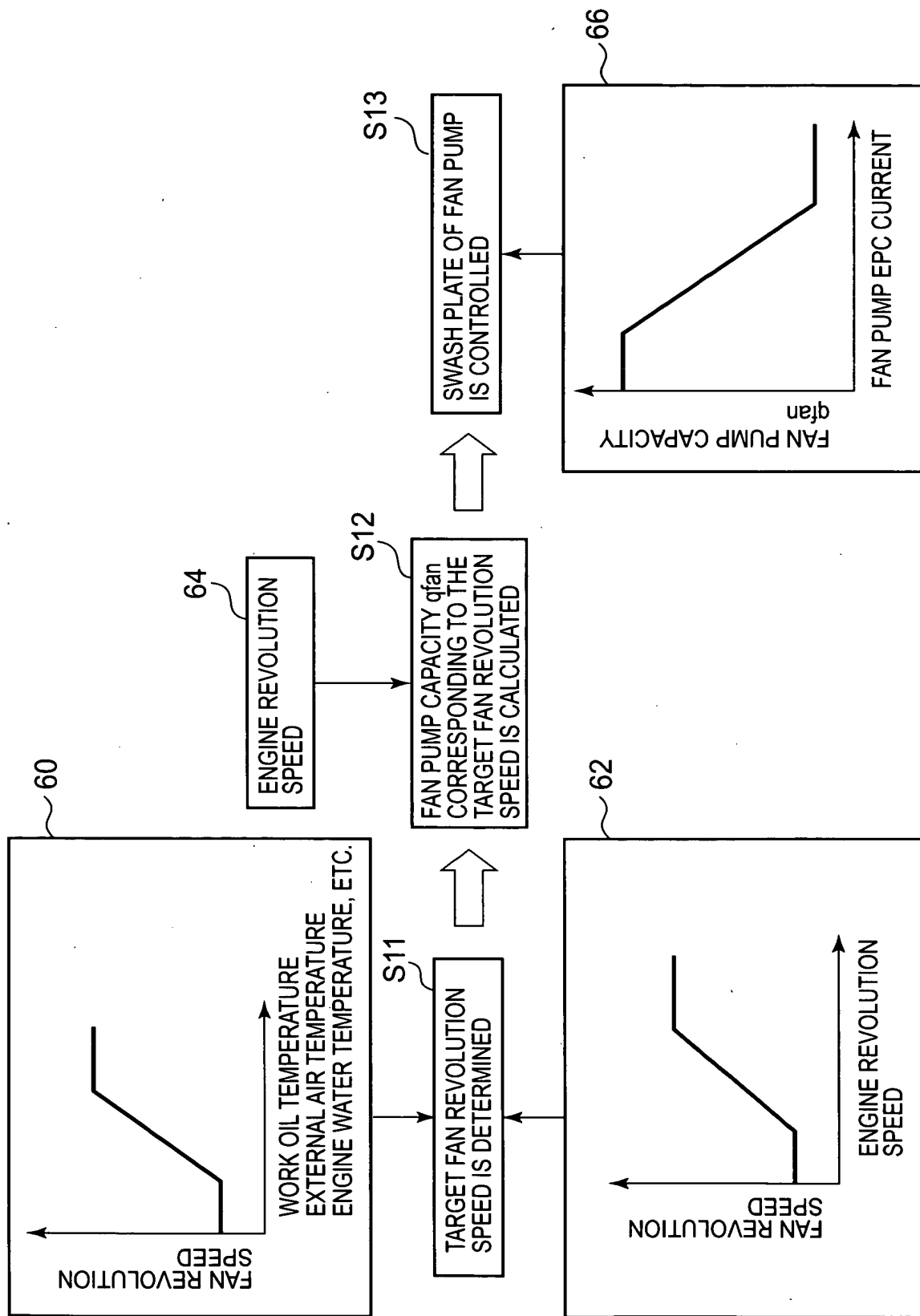
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FIG. 7



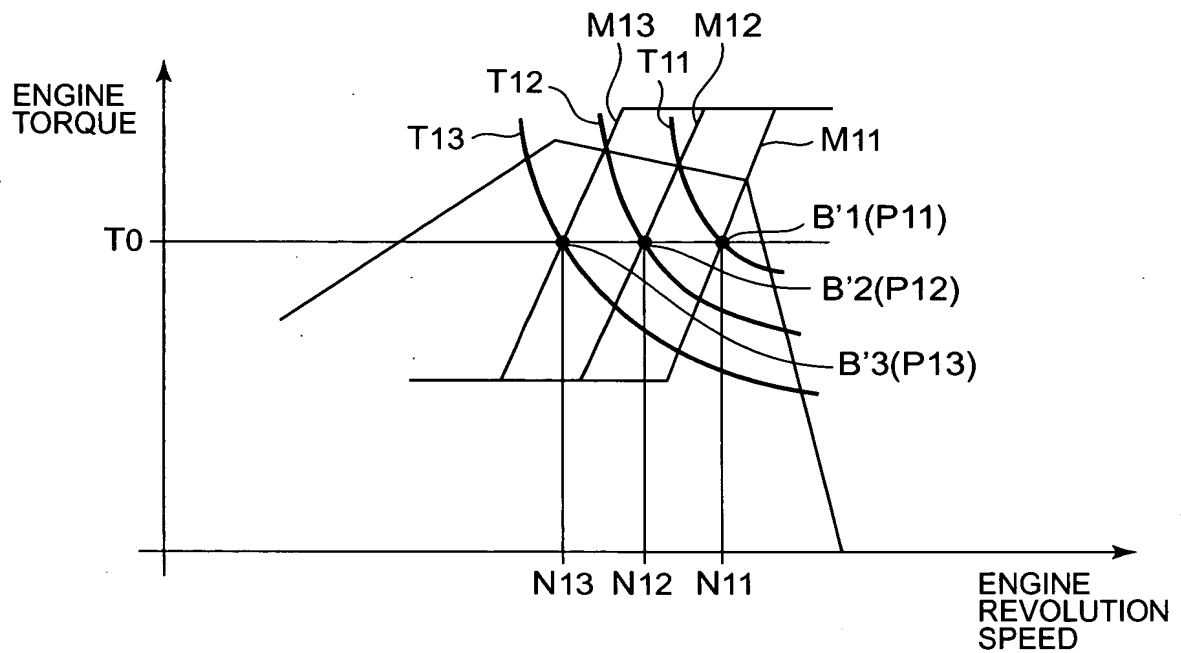
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FIG. 8



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FIG. 9



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FIG. 10

OPERATION MODE	MATCHING TORQUE	PUMP TORQUE CONTROL LINE	ENGINE OUTPUT TORQUE CONTROL LINE	ENGINE OUTPUT	OUTPUT HORSEPOWER AT MATCHING POINT
B1	T0	M11	T11	$P_{11} + \Sigma L_f$	P11
B2	T0	M12	T12	$P_{12} + \Sigma L_f$	P12
B3	T0	M13	T13	$P_{13} + \Sigma L_f$	P13

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FIG. 11A PRIOR ART

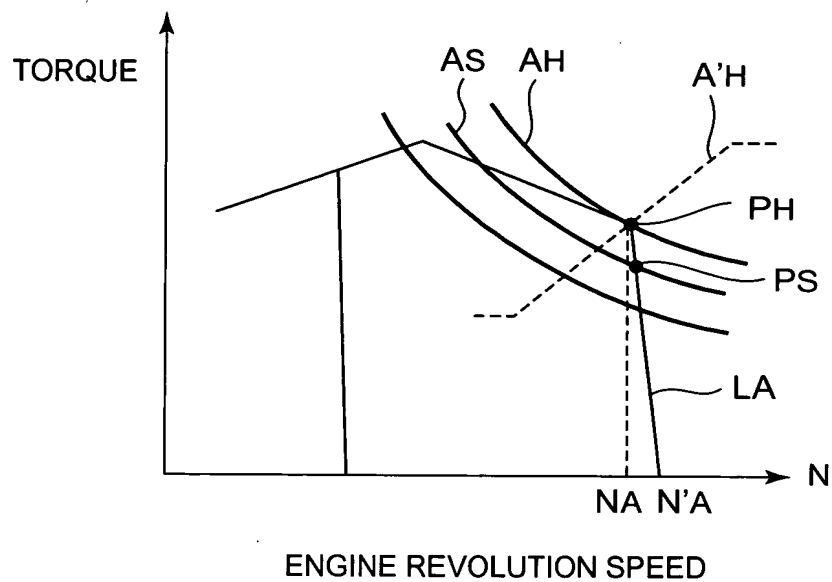


FIG. 11B PRIOR ART

